Air Conditioning Contractors of America®
Making life more comfortable for contractors and their customers.

Residential Plans Examiner Review Form For HVAC Load Calculations and Duct System Design

City of Hampton, VA

Contractor / Engineer: _____

Master Mechanical Tradesman Number : _____

Project Address: _____

REQUIRED ATTACHMENTS

Manual J1 Form (with worksheets A & B) ☐
Manual J1AE Form (with worksheets A & B) ☐
Manual D Friction Rate Worksheet ☐
Duct Distribution System Layout/sketch (cfm per difuser size) ☐
Proposed Equipment Model Numbers _____

HVAC System Design Criteria (ICC-IRC M1401.3)

Design Conditions

Winter Design	Degrees Farenheight		Summer Design	Degrees Farenheight	
Outdoor:	22	° F	Outdoor:	92	° F
Indoor:	72	° F	Indoor:	75	° F
Total Heat Loss	_____	Btu/h	Sensible Heat Gain	_____	Btu/h
			Latent Heat Gain	_____	Btu/h
			Total Heat Gain	_____	Btu/h

General Building Information

Orientation(front door faces) _____
(North, East, West, South, Northeast, Northwest, Southeast, Southwest)
Number of Bedrooms: _____
Floor area (square feet) _____
Number of Occupants: _____
Envelope Tightness Estimate _____
(Tight, Semi-tight, Average, Semi-loose, Loose)

Window Type
Insulation R-Values **Attic** R-38 **Wall** R-13 **Flr** R-19
System Type: RTU Split PKG
Eave Overhang Depth _____ Ft.
Number of Skylights: _____
System Cooling Btu/h: _____
System Heating Btu/h: _____

SEER: _____ EER: _____ HSPF: _____ COP: _____ AFUE: _____

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (ICC-IRC M1601.1)

Design Airflow _____ CFM # Supply Air Grilles _____ #Return Air Grilles: _____

Equipment Design ESP _____ IWC
OEM Blower tables
Total Device Pressure Losses _____ IWC
Cumulative total of dampers, registers, filters, etc.
Available Static Pressure(ASP) _____ IWC
Equipment Design ESP-Total Device Pressure Losses

Total Effective Length (TEL)
Supply _____ Ft.
Return _____ Ft.
Total(TEL) _____ Ft.

Friction Rate $\frac{(ASP \times 100)}{TEL}$ = _____ IWC

Duct Material: _____
Sheetmetal, Lined metal, Ductboard, Flex (ducts marked by type)

I declare the load calculation, equipment selection and duct distribution design is accurate and rigorously performed to the best of my ability. I understand the claims made on these form will be subject to inspection and verification.

Printed Name: _____ Date: _____

Contractor'/Engineer's Signiture _____